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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LY, NGHI H

ART UNIT PAPER NUMBER

2617

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/786,529	Applicant(s) KAUDINYA, MURALI P.	
	Examiner Nghi H. Ly	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13-26 and 28-40 is/are rejected.
- 7) ☒ Claim(s) 12 and 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

DETAILED ACTION

Claim Objections

1. Claims 10 and 25 are objected to because of the following informalities: the acronym "RFID" should associate with a definition. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-9, 11, 13-20, 22-24, 26, 28-32, 34 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Haverinen et al (US 2004/0208151A1).

Regarding claims 1, 13, 31 and 32, Haverinen teaches in a transceiver (see fig.5, 501), a method for authenticating operation of the transceiver with a control station within a wireless remote identification system (see Title and Abstract), the method comprising: receiving transceiver configuration information including a network address (see page 4, [0029], page 8, [0046]) and transceiver authentication credentials (see page 4, [0029], page 8, [0046]), receiving an authentication request from a control station within the remote identification system (see page 4, [0029] , page 8, [0046]), applying authentication processing to request information within the authentication

request in conjunction with the transceiver authentication credentials to produce an authentication response (also see page 4, [0029], page 8, [0046]), and transmitting the authentication response to the control station to allow the control station to determine if the transceiver is authorized to communicate within the remote identification system (see page 4, [0029], page 8, [0046], see page 2, [0009] and [0010]).

Regarding claims 2 and 17, Haverinen further teaches

i) a transceiver identification code uniquely assigned to the transceiver (see page 4, [0029], page 8, [0046]), and

ii) a transceiver instruction set containing a set of authentication values and corresponding authentication instructions (see page 4, [0029], page 8, [0046]).

Regarding claims 3 and 18, Haverinen further teaches periodically receiving replacement transceiver authentication credentials to replace the transceiver authentication credentials formerly received by the transceiver (see page 7, [0043], and see page 12, claim 27).

Regarding claims 4 and 19, Haverinen further teaches the request information within the authentication request includes:

i) an request authentication result (see page 4, [0029], page 8, [0046]), and
ii) a request data value (see page 4, [0029], page 8, [0046]), wherein applying authentication processing to request information within the authentication request in conjunction with the transceiver authentication credentials to produce an authentication response (see page 4, [0029] , page 8, [0046]) comprises:

identifying an authentication instruction that matches the request authentication

result (see page 10, claim 10 and see page 11, claim 14), and applying the authentication instruction that matches the request authentication result to the request data value from the authentication request to produce the authentication response (see page 10, claim 10 and see page 11, claim 14, and see page 4, [0029] , page 8, [0046]).

Regarding claims 5 and 20, Haverinen further teaches applying an authentication function to authentication values in the set of authentication values within the transceiver authentication credentials to produce corresponding transceiver authentication results (see page 4, [0029], page 8, [0046]), and for each transceiver authentication result produced, determining if the transceiver authentication result matches the request authentication result for that authentication value (see page 2, [0009]), and if the transceiver authentication result matches the request authentication result for that authentication value (see page 4, [0029], page 8, [0046] and see page 10, claim 10 and see page 11, claim 14), performing the operation applying the authentication instruction to produce the authentication response (see page 4, [0029], page 8, [0046]).

Regarding claims 7 and 22, Haverinen further teaches applying the authentication instruction to the request data value in conjunction with the transceiver identification code to obtain the authentication response (see page 4, [0029], page 8, [0046]).

Regarding claims 8 and 23, Haverinen further teaches

i) an authentication acknowledgement is received from the control station indicating that the transceiver was successfully authenticated (see page 6, [0039] and page 7, [0042]), and

ii) a number of repeated attempts to authenticate the transceiver each fail (see page 8, [0046]).

Regarding claims 9 and 24, Haverinen further teaches

i) a different request authentication result for use by the transceiver to select an authentication instruction (see page 4, [0029], page 8, [0046]), and

ii) a different request data value for use by the transceiver during application of the selected authentication instruction (see page 4, [0029], page 8, [0046]).

Regarding claims 11 and 26, Haverinen further teaches performing an automatic download operation to receive the transceiver authentication credentials during trusted time period of operation of the transceiver (see page 7, [0043]).

Regarding claims 14 and 29, Haverinen selecting a transceiver authentication value from the transceiver authentication credentials (see page 4, [0029], page 8, [0046]), and applying an authentication function to the transceiver authentication value to produce the request authentication result for use in the authentication request (see page 4, [0029], page 8, [0046]).

Regarding claims 15 and 30, Haverinen further teaches applying an authentication instruction corresponding to the selected transceiver authentication value to the request data value in conjunction with a transceiver identification code of the transceiver to which the authentication request was provided in order to produce a

control station response (see page 4, [0029], page 8, [0046]), and comparing the control station response to the authentication response answer within the authentication response to determine if they are equivalent, and if they are equivalent, indicating that the authentication response answer is valid (see page 4, [0029], page 8, [0046]).

Regarding claims 16 and 28, Haverinen further teaches a transceiver comprising: a memory (see page 5, [0032]), a processor (see page 5, [0032]), a communications interface (see fig.5, connection between 501 and 504), an interconnection mechanism coupling the memory (see fig.2, 202), the processor (see fig.2, 201), and the communications interface (see fig.2, 205), the memory encoded with an authentication process that when executed by the processor (see page 5, [0032]), causes the transceiver authenticate operation of the transceiver with a control station within a wireless remote identification system by causing the transceiver to perform the operations of: receiving, via the communications interface, transceiver configuration information including a network address and transceiver authentication credentials (see page 4, [0029], page 8, [0046]), receiving, via the communications interface, an authentication request from a control station within the remote identification system (see page 4, [0029], page 8, [0046]), applying authentication processing to request information within the authentication request in conjunction with the transceiver authentication credentials to produce an authentication response (see page 4, [0029], page 8, [0046]), and transmitting, via the communications interface, the authentication response to the control station to allow the control station to determine if the transceiver

is authorized to communicate within the remote identification system (see page 4, [0029], page 8, [0046]).

Regarding claim 34, Haverinen further teaches maintaining a set of authentication instructions and corresponding authentication values generated by the transceiver (see page 4, [0029], page 8, [0046]), matching an authentication value received in the authentication request from the control station to a respective corresponding authentication value in the set (see page 10, claim 10 and see page 11, claim 14), identifying a corresponding authentication instruction associated with the corresponding authentication value in the set and applying the corresponding authentication instruction to a data value in the authentication request to produce the authentication response (also see page 4, [0029], page 8, [0046]).

Regarding claim 40, Haverinen further teaches applying authentication processing to request information within the authentication request in conjunction with the transceiver authentication credentials to produce an authentication response (also see page 4, [0029], page 8, [0046]) includes: based on information in the authentication request, identifying one of multiple authentication instructions maintained at the transceiver (also see page 4, [0029], page 8, [0046]), and applying the identified one of multiple authentication instructions to i) a data value in the authentication request received from the control station (also see page 4, [0029], page 8, [0046]) and ii) an identification code associated with the transceiver to produce the authentication response (also see page 4, [0029], page 8, [0046]).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haverinen et al (US 2004/0208151A1) in view of Phillips et al (US 6,721,555).

Regarding claims 6 and 21, Haverinen teaches claim 5. Haverinen does not specifically disclose the request authentication result is a hash value result produced from a hash function within the control station and wherein the authentication function is an equivalent hash function within the transceiver and wherein the request authentication result is calculated by the control station using the hash function on a copy of the authentication values in the set of authentication values within the transceiver authentication credentials that is programmed into the control station.

Phillips teaches the request authentication result is a hash value result produced from a hash function within the control station and wherein the authentication function is an equivalent hash function within the transceiver and wherein the request authentication result is calculated by the control station using the hash function on a copy of the authentication values in the set of authentication values within the transceiver authentication credentials that is programmed into the control station (see Title and column 6, lines 5-28).

Therefore, it would have been obvious to one of ordinary skill in the art at the

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time the invention was made to provide the teaching of Phillips into the system of Haverinen in order to provide a system for efficiently accommodating an authentication protocol in a communication network (see Phillips, Abstract).

6. Claims 10 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haverinen et al (US 2004/0208151A1) in view of Bolle et al (US 6,819,219).

Regarding claims 10 and 25, Haverinen teaches claim 1. Haverinen does not specifically disclose the transceiver is an RFID transceiver and wherein the control station operates an RFID management application.

Bolle teaches the transceiver is an RFID transceiver and wherein the control station operates an RFID management application (see column 5, line 61 to column 6, line 4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Bolle into the system of Haverinen in order to provide a system for efficiently accommodating an authentication protocol in a communication network (see Phillips, Abstract).

7. Claims 33 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haverinen et al (US 2004/0208151A1) in view of Boylan et al (US 2005/0166091A1).

Regarding claim 33, Haverinen teaches the transceiver authentication credentials (see page 4, [0029], page 8, [0046]). Haverinen does not specifically disclose the

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transceiver authentication credentials includes at least one of a roll forward and a roll back instruction and wherein a request data value in the authentication request from the control station indicates an amount by which to roll an instruction set associated with the transceiver.

Boylan teaches the transceiver authentication credentials includes at least one of a roll forward and a roll back instruction and wherein a request data value in the authentication request from the control station indicates an amount by which to roll an instruction set associated with the transceiver (see page 5, claim 12 and see page 3, [0067]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Boylan into the system of Haverinen in order to provide a system to meet the demands of customers and hosting organizations for rapid change of business entities and real time performance (see Boylan, page 1, [0008]).

Regarding claim 35, Haverinen teaches maintaining a set of authentication instructions and corresponding authentication values generated by the transceiver (see page 4, [0029], page 8, [0046]). Haverinen does not specifically disclose and shifting a relationship position of the authentication instructions relative to the corresponding authentication values in the set by an amount specified by a data value in the authentication request such that, after shifting the relationship position, each corresponding authentication value in the set corresponds to a different authentication instruction than prior to shifting the relationship position of the authentication instruction.

Boylan teaches shifting a relationship position of the authentication instructions relative to the corresponding authentication values in the set by an amount specified by a data value in the authentication request such that, after shifting the relationship position, each corresponding authentication value in the set corresponds to a different authentication instruction than prior to shifting the relationship position of the authentication instruction. (see page 5, claim 12 and see page 3, [0067]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Boylan into the system of Haverinen in order to provide a system to meet the demands of customers and hosting organizations for rapid change of business entities and real time performance (see Boylan, page 1, [0008]).

8. Claims 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haverinen et al (US 2004/0208151A1) in view of Carroll et al (US 6,611,913).

Regarding claim 36, Haverinen teaches the transceiver authentication credentials (see page 4, [0029], page 8, [0046]). Haverinen does not specifically disclose receiving a first alphanumeric value and a corresponding first instruction, receiving a second alphanumeric value and a corresponding second instruction, and maintaining the first alphanumeric value and the corresponding first instruction at the transceiver as a first value-instruction pair, maintaining the second alphanumeric value and the corresponding second instruction at the transceiver as a second value-instruction pair.

Carroll teaches receiving a first alphanumeric value and a corresponding first instruction, receiving a second alphanumeric value and a corresponding second instruction, and maintaining the first alphanumeric value and the corresponding first instruction at the transceiver as a first value-instruction pair, maintaining the second alphanumeric value and the corresponding second instruction at the transceiver as a second value-instruction pair (see column 14, lines 29-36).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Carroll into the system of Haverinen in order to provide an embedded private-key algorithm to ensure proper authentication key transfer (see Carroll, Abstract).

Regarding claim 37, Haverinen teaches the transceiver authentication credentials (see page 4, [0029], page 8, [0046]). Haverinen does not specifically applying the authentication processing at the transceiver to the first alphanumeric value to generate a first transceiver generated result associated with the first alphanumeric value and the corresponding first instruction, applying the authentication processing at the transceiver to the second alphanumeric value to generate a second transceiver generated result associated with the second alphanumeric value and the corresponding second instruction, maintaining the first transceiver generated result along with the first value-instruction pair, and maintaining the second transceiver generated result along with the second value-instruction pair.

Carroll teaches applying the authentication processing at the transceiver to the first alphanumeric value to generate a first transceiver generated result associated with

the first alphanumeric value and the corresponding first instruction, applying the authentication processing at the transceiver to the second alphanumeric value to generate a second transceiver generated result associated with the second alphanumeric value and the corresponding second instruction, maintaining the first transceiver generated result along with the first value-instruction pair, and maintaining the second transceiver generated result along with the second value-instruction pair (see column 14, lines 29-36).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Carroll into the system of Haverinen in order to provide an embedded private-key algorithm to ensure proper authentication key transfer (see Carroll, Abstract).

Regarding claim 38, Haverinen further teaches identifying an authentication value in the authentication request received from the control station, matching the authentication value in the authentication request to one of the first transceiver generated result and the second transceiver generated result (see page 10, claim 10 and see page 11, claim 14), and if the authentication value in the authentication request received from the control station matches the first transceiver generated result, utilizing the corresponding first instruction to generate a response to the control station (see page 4, [0029], page 8, [0046]), and if the authentication value in the authentication request received from the control station matches the second transceiver generated result, utilizing the corresponding second instruction to generate a response to the control station (see page 4, [0029], page 8, [0046]).

Regarding claim 39, Haverinen further teaches identifying an authentication value in the authentication request received from the control station (see page 4, [0029], page 8, [0046]), attempting to match the authentication value in the authentication request to one of the first transceiver generated result and the second transceiver generated result (see page 10, claim 10 and see page 11, claim 14), and if the authentication value in the authentication request received from the control station does not match either of the first and second transceiver generated result (see page 10, claim 10 and see page 11, claim 14), failing authentication of the transceiver (see page 8, [0046]).

Allowable Subject Matter

9. Claims 12 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 12 and 27, claims 12 and 27 are objected for the reasons as stated in the Office action page 9 (dated 11/02/05).

Response to Arguments

10. Applicant's arguments with respect to claims 1-11, 13-26 and 28-40 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi H. Ly whose telephone number is (571) 272-7911. The examiner can normally be reached on 8:30 am-5:30 pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nghi H. Ly



Handwritten signature of Nghi H. Ly, dated 11/18/06.

Marsha D Banks-Harold
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